Arizona Water Resource Management Problems Created by the Central Arizona Project

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The continuing hope of Arizonans for more water may be realized through the Central Arizona Project (CAP).[1] In addition to bringing water, however, the CAP will pose a number of problems for water resource management in Arizona. Some of these problems are inherent in the multi-county water conservation district which the state legislature authorized,[2] pursuant to federal requirements,[3] to contract with the Secretary of Interior (Secretary) for CAP water. Other more serious problems will be generated by the operation of some of the contractual provisions that the federal CAP enabling legislation requires to be included in the master distribution contracts between the Secretary and the multi-county conservation district, and in the subcontracts between the conservation district and the ultimate users.[4] It is the purpose of this discussion to analyze those two categories of problems and to suggest solutions.

It is beyond the scope of this analysis to consider other problems associated with the CAP, such as the long-continuing debate over the CAP itself,[5] the task of quantifying the water rights of Arizona

1. 43 U.S.C. §§ 1501-1556 (1970) (Colorado River Basin Project Act). For comprehensive discussions of the CAP which is the major endeavor authorized by the Colorado River Basin Project Act, see *Hearings on S. 1658 Before the Subcomm. on Irrigation and Reclamation of the House Comm. on Interior & Insular Affairs,* 88th Cong., 1st Sess. (1963) [hereinafter cited as *Hearings on S. 1658*]; H.R. REP. No. 1312, 90th Cong., 2d Sess. (1968); Burke, *Law of the River,* MONTHLY REV. FED. RES. BANK OF SAN FRANCISCO 193, 197-99 (Oct. 1968), *quoted in* C. MEYERS & D. TARLOCK, WATER RESOURCE MANAGEMENT 419 (1971).

2. ARIZ. REV. STAT. ANN. §§ 45-2601 to -2616 (Supp. 1971-72).

3. 43 U.S.C. 1524(b)(1) (1970). The enabling legislation authorizing the multi-county conservation district states:

> [T]he Congress has appropriated funds to commence construction of the Central Arizona Project . . . and the Office of Management and Budget and the Secretary of the Interior of the United States request that an organization having power to levy ad valorem taxes be formed within the State prior to the commencement of such construction.

Ch. 50, § 1, [1971] Ariz. Sess. Laws 109.

4. 43 U.S.C. §§ 1524 (a)-(e) (1970).

5. *See generally* R. BERKMAN & K. VISCUSI, DAMNING THE WEST, THE NADER TASK FORCE REPORT ON THE BUREAU OF RECLAMATION (1971); Tippy, *Preservation Values in River Basin Planning,* 8 NAT. RES. J. 259 (1968); White & Young, *The Economics of Arizona's Water Problem,* 16 ARIZ. REVIEW, No. 3, at 13 (1967).

Indian Tribes and providing a delivery system for any water so allocated,[6] and means of minimizing the potential environmental impact of the CAP.[7] No consideration will be given to the effect of federal reclamation law on the allocation and distribution of CAP water since its effect is common to all federal reclamation projects and has been exhaustively analyzed elsewhere in the legal literature.[8]

THE MULTI-COUNTY WATER CONSERVATION DISTRICT AND ITS PROBLEMS

Recognizing the necessity of effectively distributing water from the CAP and the project's enormous cost and complexity,[9] the federal government authorized the Secretary to distribute water and recoup the costs of the project through contracts entered into with master contracting agencies established by the State of Arizona:

> Irrigation and municipal and industrial water supply under the Central Arizona Project within the State of Arizona, may in the event the Secretary of the Interior determines that it is necessary

6. These rights should not be confused with those allocated to the Indian Tribes situated along the Colorado River. The rights of those tribes were quantified in Arizona v. California, 373 U.S. 546 (1963).

7. The environmental impact of the CAP has already achieved a certain measure of notoriety. R. BERKMAN & K. VISCUSI, *supra* note 5, provides a critical analysis of the Project's environmental impact as well as its economic viability.

8. *See* Sax, *Federal Reclamation Law*, in 2 WATER & WATER RIGHTS 111 (R. Clark ed. 1967) (extensive overview of Federal Reclamation Law); Dominy, *Acquisition of Water from Federal Reclamation Projects for Industrial and Community Development*, 15 ROCKY MT. MIN. L. INST. 337 (1969); Gray, *Federal Reclamation in Texas*, 10 BAY. L. REV. 102 (1958); Sax, *Selling Reclamation Water Rights: A case Study in Federal Subsidy Policy*, 64 MICH. L. REV. 13 (1965); Taylor, *Excess Land Law: Pressure vs. Principle*, 47 CALIF. L. REV. 499 (1959).

One provision of federal reclamation law has been reinterpreted recently and may have an important impact on the ultimate users of CAP water. This provision prohibits the sale of a right to reclamation project water "to any landowner, unless he be an actual bona fide resident on such land, or an occupant thereof residing in the neighborhood of said land." 43 U.S.C. § 431 (1970). Its purpose was to prevent land speculation by prohibiting absentee land owners from receiving reclamation water, but the provision was emasculated at an early date by administrative fiat. While the original interpretation of the provision stated that not only the original applicant but also all subsequent users of reclamation water must meet residency requirements, it was soon reinterpreted to mean that the requirement must be met only when the original application was made. After the application was approved, the land with its reclamation water could be quickly transferred to an absentee second party. Sax, *Federal Reclamation Law, supra,* at 240. A recent federal district court decision, however, held that the original interpretation of the residency requirement was still applicable and was a prerequisite for a receipt of water from the Boulder Canyon Project. Yellen v. Hickel, Civil No. 69-124-Murray (S.D. Cal., Nov. 22, 1971). If this case is upheld on appeal, it could disqualify nonresident landowners of Arizona property from obtaining CAP water.

9. The project will include the construction of the Granite Reef Aqueduct from Lake Havasu to a holding facility at Orme Dam in the Salt River Valley; an aqueduct from the Salt River Valley to agricultural lands surrounding the Gila River in Central Arizona; the building of the Charleston Dam on the San Pedro River in Southeastern Arizona and an aqueduct from this dam to Tucson; the construction of Buttes Dam on the Gila River and the Hooker Dam in New Mexico. H.R. No. 1312, *supra* note 1, at 59. The initial allocation of funds for the project was $832 million, plus amounts necessary for fluctuation in construction costs. 43 U.S.C. § 1528 (1970).

> to effect repayment, be pursuant to master contracts with organizations which have power to levy assessments against all taxable real property within their boundaries. The terms and conditions of contracts or other arrangements whereby each such organization makes water from the Central Arizona Project available to users within its boundaries shall be subject to the Secretary's approval, and the United States shall, if the Secretary determines such action is desirable to facilitate carrying out the provisions of this Act, have the right to require that it be a party to such contracts or that contracts subsidiary to the master contracts be entered into between the United States and any user. . . .[10]

Exercising this discretionary power, the Secretary requested Arizona to form such a master contracting agency. In response, Arizona enacted legislation authorizing the formation of a multi-county water conservation district.[11] The district, composed of Pima, Pinal and Maricopa Counties, was approved by the state water commission on June 16, 1971.[12] A new type of water district was necessary because the existing traditional water organizations in Arizona were unsuitable for the distribution of CAP water for a variety of reasons. First, their tax bases extend only to land using water supplied by the district, thus precluding them from producing sufficient funds to insure the success of the CAP.[13] On the other hand, the new water conservation district has ad valorem taxing powers covering all taxable property within a multi-county district.[14] Furthermore, the primary func-

10. 43 U.S.C. § 1524(b)(1) (1970).

11. ARIZ. REV. STAT. ANN. §§ 45-2601 to -2616 (Supp. 1971-72).

12. Tucson Daily Citizen, June 17, 1971, at 31, col. 6. The statute authorizing the formation of such a district requires the State Water Commission to hold hearings on the need for a district if three or more counties petition for its formation. ARIZ. REV. STAT. ANN. § 45-2605 (Supp. 1971-72). At hearings for the formation of the Maricopa-Pima-Pinal district, questions were raised concerning the necessity of importing CAP water to Central Arizona, the quality of the water imported, the allocation of CAP water, and the need for a district with multi-county-wide taxing powers. Tucson Daily Citizen, May 5, 1971, at 31, col. 6.

13. Basically, traditional water delivery districts (for example, irrigation districts) have the taxing power to impose district taxes and special assessments. A district tax is a "forced contribution of wealth to meet the public needs of the government." Barry v. School Dist. No. 210, 105 Ariz. 139, 140, 460 P.2d 634, 635 (1969). It is levied against district property for purposes which will benefit the public generally. An assessment, however, may be levied only against specific property which will be benefited by the improvement for which the assessment is levied. When the traditional districts were originally formed, lands included within the district had to be capable of agricultural or drainage development. *E.g.*, ARIZ. REV. STAT. ANN. § 45-1509 (1956) (irrigation district). As real property turned from agricultural to urban uses, ad valorem district taxes were still levied against the land. The land, however, was not liable for district assessments—from which most revenues were raised —unless it was benefited by some project of the district. As district property became engulfed by urban sprawl, the landowners were allowed to petition the county board of supervisors for the exclusion of their land since it was no longer suited for agricultural uses. *Id.* §§ 45-1545 to -1552 (irrigation district). Traditional district taxes and assessments are also of limited value because they are applicable only to taxable real property within the district. *Id.* §§ 45-1712, -1751 (irrigation districts).

14. *Id.* § 45-2613, -2614 (Supp. 1971-72).

tion of traditional districts is to serve agricultural interests.[15] This would have been inadequate for contracting purposes since CAP water will be distributed not only to agricultural interests but also to municipal, industrial and other users as well.[16] Finally, while unique procedures and rules will be necessary to manage CAP water resources, traditional water organizations are fettered by established administrative procedures and regulations. With power to establish rules, regulations or bylaws necessary for its effective operation,[17] the water conservation district can effectively implement the control and distribution of Arizona's new water resources.

The water conservation district possesses both administrative and general powers. Its administrative powers are similar to those of traditional water distribution organizations[18] and include the power to manage and conduct the affairs of the district, make and execute contracts, hire employees not readily available from existing state agencies, establish bylaws and perform all acts necessary to carry out the function of the district.[19] The general powers of the water conservation district, on the other hand, are potentially much broader than those of the traditional districts. The district has been given three basic powers: the power to assess an ad valorem tax on all taxable prop-

15. The formation of a traditional water delivery district amounts to the creation of a public corporation whose officers are treated as public officers. Though political subdivisions of the state, they function primarily for the benefit of private landholders. Irrigation districts, for example, were formed to collect and transport water for the profitable development of agricultural lands by private interests. *See generally* Enloe v. Baker, 94 Ariz. 295, 301, 383 P.2d 748, 752 (1963); Shumway v. Fleishman, 66 Ariz. 290, 292, 187 P.2d 636, 637 (1947); Day v. Buckeye Water Conserv. & Drainage Dist., 28 Ariz. 466, 474, 237 P. 636, 638 (1925); *In re* Auxiliary E. Canal Irr. Dist., 24 Ariz. 163, 169, 207 P. 614, 616 (1922).

16. 43 U.S.C. §§ 1501, 1524(b) (1970); ARIZ. REV. STAT. ANN. § 42-2603(2) (Supp. 1971-72).

17. ARIZ. REV. STAT. ANN. § 45-2612(A)(3), (4) (Supp. 1971-72).

18. Traditional water delivery districts are granted specified statutory powers to carry out the administration of the district, and they cannot exercise any powers beyond those expressly conferred or necessarily implied. Brown v. Electrical Dist. No. 2, 26 Ariz. 181, 189, 223 P. 1068, 1071 (1924). The statutes, however, grant fairly broad power. Each district, for example, is given the general power to manage and conduct the affairs and business of the district, but defining the business of the district may involve complex determinations. The seemingly simple purpose of irrigating arid and semi-arid lands is complicated by the need to acquire electrical power to run the irrigation system, to distribute excess power, and to buy and sell land for the district before the primary purpose of irrigation can be realized. *See, e.g.*, ARIZ. REV. STAT. ANN. § 45-1577(2) (1956) (irrigation district).

19. ARIZ. REV. STAT. ANN. § 45-2612 (Supp. 1971-72). It could be argued that to ensure efficient administration and enforcement of the CAP by the water conservation district, it is necessary to have a full-time staff of trained professionals rather than having to rely on borrowing personnel from other state agencies. The present system may lead to piecemeal operations with conservation district affairs receiving second priority. Further, such an operation can lead to divided loyalties, projects being started by one man and finished by another, and consequent long delays. It might be wise for the legislature to reconsider whether the water conservation district should be authorized to hire its own personnel. The economics achieved by borrowing personnel may be somewhat illusory.

erty within the district;[20] the power to contract with the federal government for CAP water;[21] and the power to subcontract for CAP water with water users both within and outside the district.[22]

Theoretically, the cost of constructing and operating the CAP should be defrayed entirely by charges for power and water.[23] In practice, however, these sources of revenue are unlikely to be sufficient because there is a ceiling on charges beyond which the purchase of water and power would not be economical. The deficiency will be made up by levying an ad valorem tax against all taxable property within the district.[24] Since the percentage of CAP water used by farmers will greatly exceed the percentage that their land will constitute of the tax base of the multi-county district,[25] the district's taxing power will provide a subsidy for farming interests who receive CAP water.[26]

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20. *Id.* §§ 45-2613(A)(3), -2614.

21. This is not an exclusive power. *Compare id.* §§ 45-2603(2), -2613(A)(1), *with id.* §§ 45-2607(A), -2616(A). These sections allow water users outside the district to contract for CAP water either directly with the Secretary or with the water conservation district.

22. *Id.* §§ 45-2607(A), -2613(B).

23. The CAP Act creates a development fund for the repayment of costs incurred in the construction of the project. Revenues to be paid into the fund can include funds collected in connection with the operation of CAP facilities (for example water charges), except recreational charges; Arizona's share of the revenues from the Hoover and Parker-Davis Power Projects, after such projects are paid off; and any funds allocable to Arizona from the Pacific Northwest-Southwest power intertie. 43 U.S.C. § 1543 (1970). The latter project will import surplus electrical power to the Southwestern states from the Pacific Northwest. *See* 16 U.S.C. §§ 837-837h (1970).

24. ARIZ. REV. STAT. ANN. §§ 45-2613(A)(3), -2614 (Supp. 1971-72). The district can levy a tax not to exceed 10 cents per one hundred dollars of assessed valuation. *Id.* This would appear to be a reasonable amount based upon Department of Interior studies that indicated that costs not recovered through water consumption charges would be paid for by a tax of 0.6 mills per dollar (6 cents per $100) of assessed valuation of Pima, Pinal and Maricopa Counties. H.R. REP. No. 1312, *supra* note 1, at 91. This safety margin would appear to provide sufficient funds to insure a solvent program, assuming that the economic analysis of the Interior Department is sound.

The actual mechanics of tax collection will be handled through the appropriate county offices. After the district court levies the tax rate necessary for district operations and financial obligations, it will be collected by the county in conjunction with the collection of general county taxes. ARIZ. REV. STAT. ANN. § 45-2614 (Supp. 1971-72). The term taxable property, as used in the water conservation district legislation, apparently applies to both real and personal property. *Id.* §§ 42-136, -227. Besides a power to tax, the water conservation district can also accept grants, gifts, and donations of money from any source. *Id.* § 45-2612(B). Presumably, the principal donor would be the federal government.

25. As of 1958, 90 percent of the water used in Arizona for economic production was for agricultural crops, with 75 percent of this total being used for cotton, food, feed grains and forage crops. Martin & Bower, *Patterns of Water Use in the Arizona Economy*, 15 ARIZ. REVIEW, No. 12, at 3 (1966). Those expressing interest in CAP water have been predominantly irrigators; 3,655,000 acre-feet have been requested for irrigation purposes while 1,046,000 acre-feet have been requested for municipal and industrial uses. 23 ARIZ. INTERST. STREAM COMM. ANN. REP. 5 (1970). The initial quantity of water that will be delivered through the CAP will be 1.6 million acre-feet (MAF) per year minus losses due to evaporation. *Id.* at 11. A congressional committee estimated that if 1.2 MAF were to be delivered, only 1.02 MAF would reach the ultimate consumer. The losses suffered delivering the 1.6 MAF would consequently be higher. *Hearings on S. 1658*, *supra* note 1, at 127.

26. S. REP. No. 408, 90th Cong., 1st Sess. 47 (1967):

> With the adoption of an amendment to . . . [the CAP Act], providing

The constitutionality of the district's power to levy an ad valorem tax upon all taxable property in the multi-county district cannot be seriously doubted. Similar districts in other states have been upheld as valid legislative enactments. In those cases the taxing power has been justified on the ground that the water is delivered for a public purpose and therefore all must contribute to the cost of its delivery.[27] It is for the legislature to determine what consitutes a "public purpose," although the purposes that will withstand judicial scrutiny as being public vary according to industrial developments and changing social conditions.[28] Once the legislature has spoken, however, the judicial branch will not substitute its view for that of the legislature unless the facts show conclusively that the latter has undeniably abused its power.[29] The Arizona legislature has indicated that the purpose of the water conservation district is "the development of an adequate supply of water for agricultural, municipal, industrial, fish and wildlife, recreational and other beneficial uses within the State [which are] vital for the well being, health and prosperity of the people of the state."[30] This state-

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for a substantial basin development fund, . . . it appears to the committee that the contemplated ad valorem tax will be unnecessary and that this authority will not have to be exercised. It is the intention of the committee that the Secretary is to require the use of an ad valorem tax only if such a tax is found to be necessary to provide revenues to accomplish the repayment of the project. . . .

In view of the provision for a development fund to assist in repayment of irrigation costs it is the opinion of the committee that the need for an ad valorem tax is very remote. The committee has concluded, however, that this provision should nevertheless be retained in the bill for use under unforeseen circumstances which could develop at some future time. This will provide an added guarantee that the project costs will be repaid.

When this statement was made, however, the projected charges for water were $10 per acre-foot for irrigation uses and $50 per acre-foot for municipal and industrial uses. See H.R. REP. No. 1312, *supra* note 1, at 91. The actual costs of delivering water to the farmer at the canal side, however, has been estimated at $25 to $30 per acre-foot. Since this price is economically unfeasible for agricultural production, a higher price for municipal uses as well as the ad valorem taxing provisions are necessary to recover the loss incurred in the delivery of irrigation water. White & Young, *supra* note 5, at 13.

Another possible source of revenue, the creation of new power sites on the Colorado River, was precluded by the CAP Act. 43 U.S.C. § 1523(a) (1970). Furthermore, water delivery contracts can be valid for no more than 50 years. *Id.* § 1524 (b)(2). Water users—both municipal and agricultural—will be unwilling to bind theselves to a price that is significantly greater than other sources of water, such as groundwater, because the user would be bound to that price for an extensive period of time. Young, *The Arizona Water Controversy: an Economist's View,* 6 J. ARIZ. ACADEMY SCI., No. 1, at 3 (1970). Finally, the enabling legislation states that the district *shall* levy a tax to meet its financial commitments. ARIZ. REV. STAT. ANN. § 45-2613(A)(3) (Supp. 1971-72).

27. Santa Barbara County Water Agency v. All Persons, 47 Cal. 2d 699, 306 P.2d 875 (1957); People *ex rel.* Roger v. Letford, 102 Colo. 284, 79 P.2d 274 (1938); Gutierrez v. Middle Rio Grande Conserv. Dist., 34 N.M. 346, 282 P. 1 (1929); Patterick v. Carbon Water Conserv. Dist., 106 Utah 55, 145 P.2d 503 (1944). Other federal reclamation projects that have been financed by the use of ad valorem taxation include the Colorado River Storage Project and Fryingpan-Arkansas Project, both within the state of Colorado. H.R. REP. No. 1312, *supra* note 1, at 91.

28. City of Glendale v. White, 67 Ariz. 231, 237, 194 P.2d 435, 439 (1948).

29. *Id.*

30. Ch. 50, § 1, [1971] Ariz. Sess. Laws 1st Sess. 109.

ment of purpose by the legislature recognizes the necessity of a water supply sufficient to meet the needs of a growing urban society as well as satisfying other necessary uses of water. Even though agricultural interests will reap a large private gain from the operation of the water conservation district, it can be argued that the gain is only incidental to the total benefits which the state will ultimately receive. It would thus be difficult, if not impossible, to show conclusively that the legislature was attempting to benefit only agricultural interests. Because CAP water can be transferred from agricultural to municipal uses at a later date,[31] such water constitutes a potential future water supply for the state's rapidly growing cities. Thus, the tax can be viewed as repayment of the costs of constructing a statewide asset. Therefore, while challenges to the constitutionality of the district's taxing power may be forthcoming, they are unlikely to be successful.[32]

While taxes may be collected to help pay the district's contractual obligations, it is uncertain who will enforce the contracts. Though one might assume that the district itself would have the duty, the enabling legislation setting forth the district's powers and duties is ambiguous in this regard. Since exclusive powers of enforcement of CAP water user contracts have not been vested in either government, the federal and state governments apparently will have concurrent rights. While the federal government will undoubtedly reserve some right to enforce the contract provisions,[33] it seems unlikely, in view of the local nature of the contracts, that it will assume primary responsibility.[34] Subject to federal observation, the state will probably enforce most contracts including the contract provisions containing federal requirements. Where the Secretary contracts directly with the ultimate user, however, federal enforcement is likely.[35]

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31. See text accompanying notes 78-80 *infra.*

32. In its last session, the Arizona legislature passed H.R. 2367, which provides procedures for the validation of contracts entered into between a multi-county water conservation district and the Secretary and between these two parties and CAP water users. The legislation provides a nonmandatory judicial review of all such contracts. The court would

> determine whether the proceedings had for the organization of the petitioner are in compliance with all applicable laws of the state, whether the proceedings leading up to the making of the contract are valid and whether the proceedings in connection with the filing of the petition in the action and the giving of notice of hearing thereon comply with the provisions of this article and whether the contract is valid and binding upon and enforceable against the petitioner. No other issues shall be considered or determined by the court.

Ch. 60, [1972] Ariz. Sess. Laws —.

33. The CAP Act specifically provides that the Secretary shall have the right to be a party to the contracts between the water conservation district and Arizona users to facilitate carrying out the provisions of the Act. 43 U.S.C. § 1524(b)(1) (1970).

34. This is suggested by the federal government's request for a state contracting agency to subcontract with users for CAP water.

35. The Arizona statute specifically provides that water users who are outside

Arizona's powers of enforcement have not been expressly vested in the conservation district. Two inferences are possible. On the one hand, it may indicate that enforcement will lie with the state attorney general's office, which will act on information provided by the conservation district. This procedure is authorized by the statute that requires the water conservation district to call upon qualified employees from other state agencies when they are available.[36] On the other hand, it could be inferred that the district's grant of administrative power to perform all acts necessary for the fulfillment of the objectives of the water conservation district gives it the power to enforce the contracts.[37] Since the power of enforcement is a necessary incident of the right to contract, which is a valid objective of the water conservation district, it could be argued that the right to sue is included in the broad grant of administrative power. Since the ultimate users are negotiating directly with the district for the delivery of water, it would be highly desirable to vest the district with the power to enforce those contracts. It would be intimately aware of the problems of particular users and should be in the best position to judge who is violating the provisions of the contract.[38] To correct this ambiguity in the present law, the state legislature should designate specifically who will enforce and defend the water conservation district's contractual rights and obligations. Preferably, the district will be given the task.

CAP Contract Provisions and Their Conflict with State Law

The goals of the CAP are to reduce the groundwater overdraft in Arizona, "maintain as much as possible" the amount of land currently under irrigation, and provide an additional source of water for municipal and industrial uses that will develop during the next 30 years.[39] In order to promote these goals, the federal government has required that certain restrictions governing the use of CAP water

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the boundaries of the water conservation district but who can still receive CAP water can contract directly with the Secretary. ARIZ. REV. STAT. ANN. § 45-2616(A) (Supp. 1971-72). Groups which would contract directly with the Secretary might include the various Indian Tribes of Arizona, federal wildlife refuges, and other federal parks and agencies with a need for and entitlement to CAP water.

36. *Id.* § 45-2612(A)(6).

37. *Id.* § 45-2612(A)(4).

38. Another argument in favor of giving the water district enforcement powers is that the water conservation district is a public improvement district with the same powers that are granted to other municipal corporations of the state. *Id.* § 45-2602.

39. H.R. REP. No. 1312, *supra* note 1, at 53-55. Given a limited supply of water and a goal of reducing groundwater overdrafts, it would appear that agricultural uses must decrease as municipal and industrial uses increase. The phrase "as much as possible" appears to be a subtle way of saying irrigation uses must give way to the needs of Arizona's major population centers.

must be incorporated into contracts for CAP water between the Secretary and the conservation district, and the Secretary or the district and ultimate users. Unfortunately, many of these restrictions appear to be incompatible with existing state law; means must be found to resolve the potential conflicts.

The contract restrictions, which are aimed at conserving and effectively using CAP water, include: a prohibition of the use of CAP water on land not having a recent history of irrigation;[40] provisions establishing procedures for water exchanges and priorities during periods of shortage;[41] a provision authorizing the Secretary to sell water to municipal and industrial users without a mandatory preference for agricultural uses;[42] and provisions imposing water conservation restrictions on CAP water users.[43] Although Congress stipulated that certain provisions *must* be followed, their effectiveness will be dependent to a great degree on the Secretary's interpretation of the law, a discretionary power whose importance in attaining CAP goals should not be underestimated.

The constitutionality of these provisions cannot be seriously doubted. In *Arizona v. California*[44] the Supreme Court of the United States held that Congress has the power to apportion the waters of an interstate navigable stream among the river basin states and that once so apportioned, the Secretary may be delegated the power to use his discretion in distributing such water within each of those states.[45] It might be argued that the provisions to be written into the contracts go beyond regulations reasonably necessary to control the waters of the "navigable" Colorado. The requirement that agricultural lands have a recent history of irrigation in order to qualify for CAP water indicates Congress has chosen to apportion the water only to existing agricultural uses. This appears reasonable considering that the limited supply of water available from the Colorado River will not stop the depletion of water resources within the state.[46] While Congress cannot forbid such a depletion, it can decide that water resources which it has made available may not be used in areas where there are

40. 43 U.S.C. § 1524(a) (1970).
41. *Id.* § 1524(d), (e).
42. *Id.* § 1524(b)(3); *see id.* § 485h(c) (last sentence).
43. *Id.* § 1524(c).
44. 373 U.S. 546 (1963).
45. 373 U.S. at 564-92.
46. H.R. REP. NO. 1312, *supra* note 1, at 55, stated that the annual overdraft of groundwater is approximately 2½ million acre-feet of water per year. Delivery by the CAP of 1.2 million acre-feet of water will alleviate approximately half of this overdraft. By controlling the depletion of Arizona's limited groundwater reserves, Congress is achieving the further goal of effectively using Colorado River water, which is a valid federal concern.

no local controls aimed at preventing such depletion. Similarly, Congress can impose water conservation restrictions on the use of the valuable Colorado River water even though such restrictions may conflict with existing state statutes and case law. Furthermore, the provisions authorizing the nonpreferential sale of CAP water are merely an expression of Congress' desire to supply both municipal and agricultural uses with reclamation water, while the water exchange provision[47] is simply a voluntary program for the exchange of sources of water. Although these provisions appear to be relatively reasonable, their effective implementation is fraught with difficulties.

Use of CAP Water on Land not Having a Recent History of Irrigation

An important contract provision required by the CAP Act prohibits the use of CAP water directly or indirectly on lands not having a recent irrigation history, as determined by the Secretary.[48] Congress desired to maintain currently irrigated acreages, recognizing the economic benefits to the state and to the nation arising out of agriculture in Arizona.[49] The intent was to alleviate the necessity of retiring currently irrigated acreage because of decreasing groundwater supplies and increasing groundwater costs, rather than to bring more acreage into production. The importation of CAP water into an area should have the concomitant effect of freezing the process of reclamation of desert lands for irrigation in that area. A related Congressional desire was to reduce the overdraft of groundwater in Arizona. By importing Colorado River water to areas of groundwater overdraft, CAP water may be used instead of groundwater, thus reducing withdrawals. The anticipated result would be that the reduced withdrawals, in conjunction with the recharge from CAP water, would allow for aquifer replenishment while sustaining current agricultural production.

The restriction that CAP water may not be used directly or indirectly on lands not having a recent history of irrigation is an obvious method of approaching these CAP goals. The term "indirectly" is undefined by the Act but it should be interpreted to mean that Cap water cannot be used as a substitute for present water sources in order to release them for the development of previously unirrigated land. Rather, CAP water should be used only to supplement present

47. A water exchange program provides for the exchange of a present source of water for a new source, for example CAP water exchanged for groundwater or Gila River water.

48. 43 U.S.C. § 1524(a) (1970). The following lands are specifically exempted from this provision: Indian lands, national wildlife refuges, and with the approval of the Secretary, state-administered wildlife management areas.

49. H.R. REP. No. 1312, *supra* note 1, at 53-55, 147.

water sources on land currently under cultivation. Such an interpretation would be consistent with the spirit of the CAP Act.[50]

What constitutes a "recent" history of irrigation will be difficult to determine before an actual ruling by the Secretary. The term recent is not defined by the Act, but this omission was intentional. Congress considered and rejected a proposal to define recent as "four years or earlier," acknowledging that situations may arise which require discretion and sound judgment, and that the imposition of an arbitrary time limit of 4 years would restrict the Secretary's freedom to deny or approve water uses as the circumstances dictated.[51] The grant of discretion is arguably preferable to a specific inflexible time period because it gives the Secretary the power to disallow agricultural expansion.[52] In areas where the water might be used to grow surplus crops, recent could be defined as 2 years. On the other hand, if an area were experiencing a severe economic depression, water could be sold for the agricultural development of land not irrigated within the last 6 years. This example, of course, assumes that the discretionary power of the Secretary to define the word recent will always be exercised in a reasonable manner. The Secretary, of course, could abuse his discretion and allow the expansion of certain agricultural interests to the detriment of other water users, but this danger always accompanies broad grants of discretionary power.

A preferable alternative to either complete, unbridled administrative discretion or a time period fixed by statute would be the development of administrative rules defining recent use. Such a ruling would provide uniformity, stability and predictability, while avoiding the unnecessary delays which would occur if the Secretary were forced to decide on a case-by-case basis if each new situation presented a recent use of land for irrigation purposes. Planning would be facilitated because water users could rely upon the definition contained in the regulations when requesting CAP water. Still, the rules could be amended easily to allow for unforeseen changes in the amount of water available or for urgent demands for new agricultural production. The Secretary should be encouraged to move in this direction.

The definition of the term recent can have an important impact on Arizona's groundwater law.[53] This legislation restricts agricul-

50. *See, e.g.*, 43 U.S.C. §§ 1501(a), 1524(a), (c), (g) (1970).
51. S. REP. No. 408, *supra* note 26, at 46.
52. The Congressional denial of CAP water to lands without a recent history of irrigation does not prevent the state from opening new lands for agricultural uses. If such lands are opened, however, they cannot receive CAP water or draw water from aquifers replenished by the CAP. Thus, to a limited extent Congress can control land use in Arizona by its allocation of CAP water.
53. ARIZ. REV. STAT. ANN. §§ 45-301 to -324 (1956), *as amended*, (Supp. 1971-72).

tural development of new groundwater sources within critical groundwater areas[54] on land not irrigated within the past 5 years.[55] It was interpreted, however, to allow development of virgin land—land without a history of irrigation—so long as previously cultivated land was retired.[56] Such an interpretation of the state law could conflict with the federal requirement prohibiting non-recent uses. If, for example, an irrigator within a critical groundwater area decides not to contract for CAP water, he would obviously not be bound by CAP contract restrictions. Still, he could take advantage of a replenished aquifer caused by the importation of CAP water. Under present state law, he could use the water on uncultivated lands, so long as previously irrigated lands were taken out of agricultural production.[57] Developing these lands necessitates the indirect application of CAP water to land with no recent history of irrigation.

A similar problem accompanies the development of acreage not within a critical groundwater area. Unhampered by the state restriction on irrigating new lands, an irrigator who elected not to receive CAP water could irrigate as much new and additional acreage as he wished, pumping water from a CAP replenished aquifer but untouched by CAP contractual provisions. Encouraged by Arizona's rule that a landowner is entitled to the reasonable use of the groundwater beneath his land,[58] the irrigator could thwart the Act's goal of partially replenishing the state's water resources.

Regardless of whether a fixed or a flexible definition of the term recent is used,[59] it should not be interpreted to allow the use of CAP water, or present surface and groundwater which is replenished by CAP water, on virgin land even when previously irrigated lands are taken out of production or retired because of agricultural unsuitability.[60] Virgin land should not qualify for CAP water since by definition it does not have a recent history of irrigation and taking old

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See also Clark, *Groundwater Management: Law and Local Response*, 6 ARIZ. L. REV. 178 (1965); "Reasonable Use of Percolating Groundwater," 13 ARIZ. L. REV. 313, 490 (1971).

54. A critical groundwater area is defined by statute as: "[A]ny groundwater basin . . . or any subdivision thereof, not having sufficient groundwater to provide a reasonably safe supply for irrigation of the cultivated lands in the basin at the then current rates of withdrawal." ARIZ. REV. STAT. ANN. § 45-301(1) (Supp. 1971-72).

55. *Id.* §§ 45-313, -314(A).

56. State *ex rel.* Morrison v. Anway, 87 Ariz. 206, 349 P.2d 774 (1960).

57. *Id.*

58. Bristor v. Cheatham, 75 Ariz. 227, 255 P.2d 173 (1953). For an extended discussion of this case and the meaning of the term "reasonable use," see "Reasonable Use of Percolating Groundwater," 13 ARIZ. L. REV. 313, 490 (1971).

59. See text accompanying notes 51-52 *supra*.

60. Land may become unsuitable for agriculture because of the effect of alkaline buildup due to irrigation of the land. *See In re* Bonds of Drainage Dist. No. 4, 22 Ariz. 31, 193 P. 833 (1922).

land out of production does not provide the new land with such a history. Therefore, when the old land is retired, previously uncultivated land should not be substituted and irrigated with CAP water. Furtheremore, present surface and ground water sources replenished by CAP water should not be used on previously unimproved lands because it would constitute an indirect use of CAP water on land without a recent irrigation history.[61]

By thus limiting the opening of virgin lands, an intelligent interpretation of the term recent promotes three potential benefits to the state. As agriculturally unsuitable lands are retired, the water can be diverted to municipal or industrial uses which are more economic.[62] Moreover, prohibiting the use of the water on uncultivated land may operate to preserve further CAP resources since such land might require more water for proper irrigation than did the previously irrigated land.[63] Finally, the prohibition on irrigating new lands would help to preserve the natural beauty of the surrounding desert.[64]

To restrict the use of CAP water on uncultivated land, steps must be taken to rectify the apparent conflict between state and federal legislation. Several alternatives are open to the legislature or judiciary. One would be to allow conflicts to be resolved by case law as they arise.[65] The courts will have an opportunity to harmonize previous decisions with the CAP Act when they are called upon to test the validity of CAP water contracts. Still, such an action probably would only affect farmers within a critical groundwater area. Water users beyond the boundaries of a critical groundwater area would be unaffected by the ruling because the state has chosen not to regulate such uses and therefore these irrigators could develop new agricultural uses freely.

A second alternative would be a state-wide ban on agricultural development of land which does not have a recent history of irrigation. While the result of such an act is certain, its long-term effects could be detrimental to the state's economy. If an area within the state has sufficient surface or groundwater resources independent of CAP water,

61. See text accompanying note 50 *supra.*
62. See text accompanying notes 78-80 *infra.*
63. It seems logical to assume that the land which requires the least amount of water would be the land used first by the farmer and thus would have a history of irrigation. If virgin land is of a more porous nature than the land previously irrigated, additional water would be required to irrigate it properly. It is possible, however, that the best quality land, and that land which was irrigated first, was of a more porous nature.
64. *See* 43 U.S.C. § 1527 (1970), which authorizes the conservation of wildlife resources as a valid objective of the project.
65. Reversal of State *ex rel.* Morrison v. Anway, 87 Ariz. 206, 349 P.2d 774 (1960) would be one such necessary step. See text accompanying notes 54-56 *supra.*

agricultural expansion is not detrimental to CAP goals and should not be proscribed merely to solve a problem in another part of the state. A state-wide ban would therefore seem to be overly broad.

A final possibility would be legislative reform of the state's critical groundwater legislation. By amending the applicable statute,[66] the state could prohibit the use of groundwater within a critical area on acreage without a recent history of irrigation. The term recent for critical groundwater purposes could be defined as a standard compatible with the definition of recent promulgated by the Secretary pursuant to the CAP Act. Included within the state's legislative enactment should be a provision limiting the development of raw land, even if other lands were retired. Similarly, the state could redefine critical groundwater area[67] to include all aquifers, water basins and overlying lands affected by the importation of CAP water. All lands which would directly or indirectly be affected by such a delivery of water would thereby be restricted as to their use.

The problem with this latter solution is that some areas which will receive CAP water may not have a groundwater depletion problem. In fact, it is conceivable that the importation of groundwater could so raise the water table in some areas that drainage and not usage would be the problem. In such an instance, provisions could be made whereby the user could apply to the State Land Department and the Secretary for a permit to expand agricultural production.[68] In this way new lands would be developed only if the water supply warranted such an action.

Construing the term recent will also have another impact on the state's groundwater law. It appears that if recent were defined as a time period greater than 5 years, Arizona's critical groundwater law would be partially emasculated. Assuming the Secretary were to interpret recent as a period less than or equal to 15 years, a landowner conceivably could develop agricultural lands which were previously not eligible for irrigation. The new land that could be developed would be that acreage not irrigated within 6 years but irrigated within 15. This would effectively push the 5-year critical groundwater limit back to 15 years. The irrigator could contract for CAP water to develop land irrigated within the 5 to 15 year time period. After the land was under cultivation, he could apply for a groundwater drilling permit because irrigation would have taken place within 5 years.[69] The end

66. ARIZ. REV. STAT. ANN. § 45-314(A) (1970).
67. *Id.* § 45-301(1).
68. To permit such an action by the Secretary, it appears the CAP Act would have to be amended. See 43 U.S.C. § 1524(a) (1970).
69. The Arizona statute does not specify that the irrigation need be accom-

result would be new agricultural uses for groundwater causing an increased drain on the state's supply. It is therefore recommended that the Secretary consider an interpretation of recent which is consistent with the state's groundwater law. Administrative rules could be developed which would insure the continued viability of the State's critical groundwater law.

Water Exchanges

A related contract restriction imposed directly by the CAP Act provides that a water user can be required to relinqiush his present source of water if he desires to use CAP water.[70] This enables outlying areas unable to receive mainstream Colorado River water because of location and topography to benefit from the project.[71] This restriction is subject to two limitations. First, where a water user gives up his present water supply in exchange for Colordao River water, the CAP Act specifies that the landowner shall not be economically injured.[72] Factors which might help determine economic injury include whether the water was of the same quality as the water previously used, for example alkalinity and salinity, and whether new diversion systems were needed to transport the new water supply to the land. Second, contractors who exchange a present source of water for mainstream water are given priority over other mainstream users in time of shortage.[73]

Water exchanges are not new to Arizona's irrigation history. The state supreme court has held that persons who appropriate stream water can be forced to exchange their supply since an appropriator does not have title in the water but rather a right to its use.[74] The case promulgating this rule, however, could be distinguished because it dealt with state waters, which are appropriable. CAP water is not subject to appropriation under state law but is allocated and distributed pursuant to federal contract. Thus, if the state or the Secretary forces

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plished by any particular source of water if the user wishes to apply for a drilling permit. *See* ARIZ. REV. STAT. ANN. § 45-314(A) (Supp. 1971-72).

70. 43 U.S.C. § 1524(d) (1970).

71. S. REP. No. 408, *supra* note 26, at 49.

72. 43 U.S.C. § 1524(d) (1970).

73. *Id.* § 1524(e). This priority, however, is limited to the amount of nonmainstream water yielded to other water users. In other words, if a user contracted for 10 acre-feet of CAP water and gave up a present nonmainstream supply of 5 acre-feet, he would have a priority over other users of CAP water for 5 acre-feet.

74. Adams v. Salt River Valley Water Users Ass'n, 53 Ariz. 374, 388, 89 P.2d 1060, 1066 (1939):

> The right the law gives to an appropriator to the use of water for irrigation is not necessarily in the water flowing in a given stream. The source of his supply may be changed without his consent, providing the quality of the water is not lowered and he is put to no expense, and of course such change can be made when he consents.

an appropriator to trade a present use or the appropriator relinquishes his present source in exchange for CAP water, the question is whether he retains a vested right to the use of the contract water. When the same question was raised in another jurisdiction, the state court held that the landowner retained his vested right to the use of the contract water and that right could not be extinguished by the federal government without compensation.[75]

A related problem that must be answered is the nature of a user's exchange right in Colorado River water. By statute, his priority exists only to the extent he exchanged state water[76] for Colorado River water. If a drought reduces the mainstream flow of the river, the exchanger has a prior right equal to his previous vested right.[77] If a shortage occurs on both the Colorado and the river from which the user was previously appropriating water, however, the determination of his rights could present a problem. The supply of the previous source could be depleted to such an extent that the water user would have had no water supply if he had not exchanged his rights for CAP contract water. In such a case, the issue is whether the user should have a prior right to Colorado River water.

The easiest solution would be to make his rights depend entirely on the amount available in the Colorado. His right would be senior to all other CAP water users and therefore fairly well protected. Trying to determine the contractor's Colorado River right by looking to the amount that he may have received if he were using his original supply is an awkward system at best. The state would have to calculate how much he would have received from the previous source under the given circumstances and then allow the appropriator that much water from the Colorado. It is much easier to determine his total vested right and give the appropriator an absolute priority to CAP water equal to that amount. The adoption of the latter approach would mean, however, that if water were available from his previous source but the Colorado was unable to supply the contractor's uses, he would be without water while junior appropriators conceivably could still be re-

75. Wilder Irr. Dist. v. Jorgensen, 64 Idaho 538, 136 P.2d 461 (1943). *See also* Ivanhoe v. McCracken, 357 U.S. 275, 291 (1957); United States v. Gerlach Live Stock Co., 339 U.S. 725 (1950), each of which, in another context, acknowledged that if the federal government extinguishes vested property rights, it must compensate the owner accordingly. It is unclear whether an even trade, a CAP contract right for a state vested right, is adequate compensation. Such a question should be answered when the multi-county conservation district contracts are tested for their validity. See note 32 *supra*.

76. See note 73 *supra*.

77. The water user's rights would be junior to those parties who exchanged a present vested right senior to that of the junior appropriator. Similarly, the water user's rights would be subject to any prior appropriations of Colorado River water.

ceiving water from his previous sources. Due to the quantity of CAP water available, however, such an occurrence is more hypothetical than realistic.

Nonpreferential Sale of CAP Water Resources

An important provision of the CAP Act is that the Secretary may sell CAP water to industrial and municipal sources without giving a preference to irrigation uses.[78] Furthermore, the Secretary has the power to sell excess irrigation water for municipal and industrial purposes.[79] These provisions, apparently acknowledging the growth of metropolitan Phoenix and Tucson and their consequent expanding need for water, permit a later increase in the amount of water diverted for municipal and industrial purposes. Under these provisions the Secretary is given the discretionary power to set preferences according to the needs of the entire community.[80]

The Arizona Water Commission[81] will help the Secretary by submitting a state-wide plan for the distribution of CAP water resources.[82] All water users within the state, including the water conservation district, must seek the Commission's advice if they wish to contract for CAP water.[83] Such a plan is necessary for effective management of the limited available supply. Weighing the importance of the various demands, the Commission can advise the Secretary on those uses which are most needed by the state. Not bound by a mandatory preference for agricultural uses,[84] the Commission can determine that mix of contractors which will be most favorable economically. The Secretary can then determine whether the plan devised will meet federal goals and, if acceptable, allocate the water accordingly.

The final approval power of the Secretary once again raises the question of whether absolute power should be given to any one administrator of the federal government.[85] By not specifying any preference for one use as opposed to another, Congress has delegated to the Secretary discretionary power to decide who within a given state will receive the water and for what uses. Where two uses are competing for the same water, the Secretary will have the power to determine which is the more beneficial use. Conversely, the Secretary may

78. 43 U.S.C. § 1524(b)(3) (1970).
79. *Id.* § 1524(b)(2).
80. *See* S. REP. No. 408, *supra* note 26, at 28, 47-48.
81. ARIZ. REV. STAT. ANN. §§ 45-501 to -512 (Supp. 1971-72).
82. *Id.* § 45-512.
83. *Id.* § 45-512(D).
84. 43 U.S.C. § 1524(b)(3) (1970) removes the preferential position given to agriculutral uses in previous reclamation projects.
85. See text following note 51 *supra.*

use this power to prefer the least beneficial use, opting for the greatest political gain.

There are at least three ways of eliminating, minimizing or controlling the broad grant of discretionary power to the Secretary. One is for Congress to give the state absolute control of CAP water resources. Under this alternative, Arizona would have complete authority to allocate water granted to it by Congress under the doctrine of *Arizona v. California.*[86] Presumably such a task could be accomplished by the Arizona Water Commission. Proponents for either state or Secretarial control of water resources can be found, each making plausible and constructive criticism of the opposite position.[87] Even though there are inherent dangers in giving one federal administrator the power to make critical determinations as to water preferences, it is arguable that centralized control as authorized by Congress is nevertheless necessary. Under a centralized system the Secretary can effectively plan for the development of the entire river basin within the parameters set by Congress' apportionment of the Colorado River. Removed from local pressures, he can allocate the water more impartially than state administrators, but he still can call on them for their advice and cooperation in establishing preferences.[88]

The second alternative, which would greatly reduce the Secretary's discretionary power, would be for Congress to amend the CAP legislation by enacting statutory guidelines for the Secretary to follow in allocating water between municipal, industrial, and agricultural uses. This approach would preserve centralized control in the Secretary, but would more clearly define the limits within which he could act. The guidelines would help to insure that the basic objectives of the CAP would be fulfilled. The CAP Act as presently formulated allows the Secretary to select either agricultural or municipal and industrial uses with neither use being supreme.[89] Guidelines could be formulated to insure that the Secretary would choose those uses which would insure the economic viability of the Project. With guidelines setting the proper balance between agricultural and municipal uses, the Secretary could distribute a substantial amount of the CAP water to the more lucrative municipal and industrial uses[90] but still

86. 373 U.S. 546 (1963).
87. *Compare* Trelease, *Arizona v. California: Allocation of Water Resources to People, States, and Nation,* 1963 SUP. CT. REV. 158, *with* Goldberg, *Interposition—Wild West Style,* 17 STAN. L. REV. 1 (1964).
88. The Secretary is directed by statute to consult with the states in the development of a Colorado River Basin Plan. 43 U.S.C. § 1501(b) (1970).
89. *Id.* § 1524(b), *amending id.* § 485h(c).
90. See note 25 *supra.*

apportion an adequate amount for the state's most profitable agricultural uses.

The third alternative would be for the Secretary to promulgate regulations setting out the criteria he will use in deciding preferences among municipal, industrial, and agricultural uses.[91] Although the Secretary would still have broad discretion, this method would promote uniformity of application, minimize the opportunities for abuse, and facilitate planning by adding predictability. Centralized administration would be maintained in the Secretary. This system would be flexible since the regulations could be amended by the Secretary as conditions in the state changed. Of the alternatives presented, the last one appears to provide the best solution. While maintaining the broad discretionary power granted to the Secretary by the CAP Act, it provides a measure of certainty for those who must contract for and use the water. While the present power to promulgate regulations in this area is discretionary, if the Secretary refuses to act Congress could make the issuance of regulations mandatory.

Water Conservation Provisions

Additional contract provisions required by the CAP legislation are designed to promote water conservation. One provision requires that canal distribution systems must meet certain federal standards which would ensure that adequate canal linings are constructed and maintained to prevent excessive losses of CAP water during transportation.[92] A further water conservation provision that must be written into CAP water contracts is the requirement that "there be in effect measures, adequate in the judgment of the Secretary, to control expansion of irrigation from aquifers affected by irrigation in the contract service area."[93] This provision should be interpreted to mean that if an aquifer is supplemented with CAP water, the state or its contracting agencies must control groundwater consumption for agricultural uses from that entire aquifer whether it is inside or outside of a contract service area.

With proper modification, Arizona's groundwater legislation could be utilized to fulfill the requirements of this provision. The expansion

91. The CAP Act apparently gives the Secretary this power. 43 U.S.C. § 1554 (1970). That section provides that the Secretary "shall be governed by the Federal reclamation laws (Act of June 17,1902; 32 Stat. 388, and Acts amendatory thereof or supplementary thereto [codified in scattered sections of title 43, U.S.C.]) to which this [CAP] Act shall be deemed a supplement." The earlier legislation specifically gives the Secretary the power to promulgate rules and regulations, 43 U.S.C. § 373 (1970), but in permissive rather than mandatory terms.

92. 43 U.S.C. § 1524(c)(2) (1970). The standards will vary depending on factors such as the size of the canal or the type of soil or materials through which it passes. *See* S. REP. No. 408, *supra* note 26, at 48.

93. *Id.* § 1524(c)(1).

of irrigation within critical groundwater areas is restricted by prohibiting new wells in critical areas unless a permit is obtained from the state land department.[94] But there are limitations on the effectiveness of this requirement. It does not apply to noncritical groundwater areas and it is ineffectual in stopping the development of new land when old land is retired.[95] Despite these drawbacks, the critical groundwater law could provide a basic framework amenable to practical statutory modification. The amendments suggested earlier would help solve the drawbacks and deficiencies of the current law.[96]

It is beyond the scope of this discussion to evaluate the reasonable use groundwater doctrine as it operates in Arizona,[97] or the alternatives to reasonable use,[98] or to join the long debate on the merits of the state changing from the reasonable use to the prior appropriation doctrine.[99] It is not inappropriate, however, to demonstrate how adoption of prior appropriation would solve many of the conflicts which will result from the interaction of existing state groundwater law with the CAP conservation provisions. If the state adopted the doctrine of prior appropriation for groundwater, it could control the amount each user could withdraw by requiring users to obtain a permit for withdrawals. In that way the state could control both the uses and removal of groundwater for the irrigation of unimproved land.[100] The state land department could monitor the groundwater users of all who subcontract for CAP water and control the drilling of new wells in areas receiving CAP water.[101] By thus regulating the amount pumped, the state could control the depletion of aquifers and thereby satisfy the federal statutory requirements. Implementation of such a drastic change in the groundwater law of Arizona would, however, create problems. Present uses probably would have to be protected or the landowners would have to be compensated for their vested rights.[102]

94. ARIZ. REV. STAT. ANN. §§ 45-313, -314 (Supp. 1971-72).
95. See text accompanying notes 54-57 *supra.*
96. See text accompanying notes 53-66 *supra.*
97. *See* Jarvis v. State Land Dep't, 104 Ariz. 527, 456 P.2d 385 (1969), *modified,* 106 Ariz. 506, 479 P.2d 169 (1970); Bristor v. Cheatham, 75 Ariz. 227, 255 P.2d 173 (1953), *noted,* 13 ARIZ. L. REV. 490 (1971); articles cited, *supra* note 53.
98. The alternatives to Arizona's groundwater doctrine of reasonable use include the doctrine of correlative rights, the English rule of unlimited withdrawal, and prior appropriation. For an extended discussion of these groundwater doctrines see Clark & Martz, *Classes of Water and Water Rights,* in 1 WATER & WATER RIGHTS § 52.2 (B), at 326 (R. Clark ed. 1967).
99. *Compare* Bristor v. Cheatham, 73 Ariz. 228, 240 P.2d 185 (1952), *with* Bristor v. Cheatham, 75 Ariz. 227, 255 P.2d 173 (1953).
100. The groundwater laws of New Mexico provide for such a prior appropriation-permit system. *See generally* N.M. STAT. ANN. §§ 75-11-1 to -11-40 (Supp. 1971).
101. The administration of critical groundwater areas is presently accomplished by the state land department. ARIZ. REV. STAT. ANN. § 45-302 (1956). The state's water resources also could be adequately managed by the Arizona Water Commission.
102. *Cf.* Bristor v. Cheatham, 75 Ariz. 227, 225 P.2d 173 (1953). *But see* Southwest Engineering Co. v. Ernst, 79 Ariz. 403, 291 P.2d 764 (1955).

Further, steps would have to be taken to define preferences between alternative groundwater uses.[103] Finally, a totally new system of administrative controls would have to be developed to insure the feasibility of the new legislation. Despite its many problems, it could provide the most reasonable long-term solution.

A related water conservation contract provision prohibits a contractor and the Secretary from pumping or allowing others to pump groundwater "from within the exterior boundaries of the service area of a contractor receiving water from the Central Arizona Project for any use outside said contractor's service area unless the Secretary and such contractor shall agree . . . that a surplus of ground water exists and that drainage is or was required."[104] This contract restriction is intended specifically to prohibit pumping from aquifers replenished by CAP water into areas which have not been so replenished, thereby preventing water users from obtaining relatively inexpensive groundwater instead of the more costly CAP water.[105]

Defining the service area of a contractor is, of course, the key to interpreting this water conservation restriction. The most plausible definition encompasses only those areas actually serviced with CAP water.[106] Using this definition, the problems presented are relatively easy. A violation of this contract restriction would subject the user to a breach of contract which could result in the termination of his CAP water supply. Similarly, if the contractor allowed others to pump water from his CAP contract service land for uses beyond the area receiving CAP water, he would breach the water contract and be subject to a denial of water. This contract restriction would not affect the agricultural water user outside the service area who pumps water to expand his irrigation uses from an aquifer replenished by CAP water. Such an unauthorized withdrawal would, however, violate the duty of the state or its contracting agency to control the pumping of groundwater from aquifers affected by Project water.[107]

103. *E.g.*, ARIZ. REV. STAT. ANN. § 45-147 (Supp. 1971-72) (relative values of water subject to prior appropriation). For a further discussion of the prior appropriation doctrine see sources cited *supra* notes 53, 98. See also Flint, *Groundwater Law and Administration: A New Mexico Viewpoint*, 14 ROCKY MT. MIN. L. INST. 545 (1968); Mahoney & Ausness, *A Modern Proposal for State Regulation of Consumptive Uses of Water*, 22 HAST. L.J. 523 (1971).

104. 43 U.S.C. § 1524(c)(3) (1970).

105. S. REP. No. 408, *supra* note 26, at 48.

106. An alternative definition would include the entire multi-county conservation district plus those areas outside the district which contract directly with the Secretary for water. Adoption of this definition does not seem probable because it would place restrictions on aquifers completely unaffected by CAP water. Some areas at the political boundaries of the counties involved will have no chance of receiving CAP water. It is highly unlikely that the Secretary could control water resources coming from those areas. The term contract service area should be clarified when the CAP water contracts are validated.

107. See text accompanying notes 93-103 *supra*.

Assuming the contractor wants CAP water, this contractual obligation prohibiting the pumping of water from a service area to a non-service area would restrict the groundwater rights normally available to him under state law. For example, a groundwater user in Arizona can pump water off his land for uses elsewhere, assuming a neighboring landowner does not show damages to his land. Such uses could be beyond the boundaries of a contract service area.[108] Thus, the provision could effectively restrict the user's rights under state law. Such a restriction on state law is permissible, however.[109]

Another problem could arise with this provision if a piece of land has two water users: the water conservation district which will be using CAP surface supplies and another who is presently pumping water from within the soon-to-be-established contract service area to some use outside the area.[110] The groundwater user would not be subject to this provision because he would not be contracting for CAP water. The district, however, would be subject to CAP provisions. It would seem that the latter party must either lose its CAP water supply because it is not complying with CAP provisions, take away the pumper's groundwater right and compensate him for his loss, or provide a suitable substitute supply. Realizing the importance of water in Arizone, the latter is undoubtedly the best solution. It would protect both uses but still comply with the CAP Act.[111]

CONCLUSION

Bringing CAP water to Arizona's parched land poses problems both for the agencies who will distribute it and for the contractors who will ultimately use it. Vague statutes leave questions which must be answered before the district becomes fully operational. Besides the fact that the multi-county water conservation district contract must be tested in court, decisions must be made on how it will be enforced. Preferably, the water conservation district will be given the responsibility.

More important will be the effect of the contracts on Arizona's water law. Action must be taken by the Secretary and concerned state bodies to define such nebulous terms as "recent," "indirect," and "con-

108. *See* Jarvis v. State Land Dep't, 104 Ariz. 527, 456 P.2d 385 (1969), *modified,* 106 Ariz. 506, 479 P.2d 169 (1970); "Reasonable Use of Percolating Groundwater," 13 ARIZ. L. REV. 313, 490 (1970).

109. *Cf.* Ivanhoe Irr. Dist. v. McCracken, 357 U.S. 275 (1957).

110. This could occur if a landowner leased or sold the groundwater rights to a second party. *Cf.* Jarvis v. State Land Dep't, 106 Ariz. 506, 479 P.2d 169 (1970).

111. The supply might come from aquifers with surplus groundwater available or from alternative surface sources. See text following note 70 *supra.*

tract service area." Further, Arizona law must be restructured to meet the demands of the CAP Act. The state's groundwater law must be restudied to determine if it can effectively limit agricultural growth as well as promote effective use of the scarce supplies now available. To control effectively the Central Arizona Project, its water and the water resources presently used in the state, all interested parties must act to regulate all water as a public resource. The water must be used not for the benefit of a few but in a manner which is most beneficial to all water users within the state.